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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hans-Peter Mettler

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FISHER, CHRISTEN & SABOL

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WASHINGTON, DC 20036

EXAMINER

YOUNG, SHAWQUITA

ART UNIT

PAPER NUMBER

1626

MAIL DATE

DELIVERY MODE

06/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/569,824

Applicant(s)

METTLER, HANS-PETER

Examiner

SHAWQUIA YOUNG

Art Unit

1626

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-11 and 13-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-11 and 13-23 are currently pending in the instant application. Claim 1 is rejected and claims 2-11 and 13-23 are objected in this Office Action.

I. *Response to Arguments*

Applicant's arguments, filed March 17, 2009, in reference to the rejection of claim 1 under 35 USC 103 as being unpatentable over Ding, et al. (CN 1356334) have been fully considered but are not persuasive. Applicants argue that the date of the Ding, et al. reference is the copyright date of 2008. However, the Examiner wants to make clear that the reference date is that of the Chinese patent CN 1356334 which is July 3, 2002 so this reference is considered prior art. To clear up any confusion the Examiner is attaching with the Office Action a copy of the Chinese patent. The abstract provided by the Examiner from CAPLUS is enough support showing that the prior art teaches a process for preparing a similar compound to applicants' compound of formula I but the Examiner wants to make clear that the reference of Ding, et al. used in the 103 rejection is a patent and the actual patent is the reference that has the prior art date. The Examiner only used the information retrieved from CAPLUS about the patent CN 1356334 because it was in English. The Examiner is using the Chinese patent as the reference and this rejection will be made final.

Applicants' argue that the Examiner has not carried out the burden of proof to factually show in the record that Claim 1 is obvious. The Examiner disagrees with Applicants' argument. The Examiner has stated a strong prima facie case of

obviousness in the previous Office action. The bottom line is a similar reaction was already known in the art. Applicants only have a small difference between the instant claims and the reaction disclosed in the prior art. That difference is between a monoalkylamine vs. a dialkylamine which are considered homologous. Applicants have failed to provide in their arguments the unexpected results for the method of preparing a monoalkyl amine and therefore, the rejection has been maintained. The Examiner wants to emphasize that one of ordinary skill in the art would try to prepare a compound of formula I wherein X is S and R is an alkyl (i.e. methyl) wherein the amine group is a monoalkyl amine when the prior art teaches a similar compound wherein the amino group is a dialkylamine and using the same process as claimed in the prior art with a reasonable expectation of success. Therefore, without unexpected results the claimed process wherein X is S and R is alkyl is unpatentable over the Ding, et al reference (CN 1356334).

II. *Rejection(s)*

35 USC § 103 - OBVIOUSNESS REJECTION

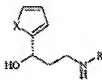
The following is a quotation of 35 U.S.C. § 103(a) that forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Graham v. John Deere Co. set forth the factual inquiries necessary to determine obviousness under 35 U.S.C. § 103(a). See *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Specifically, the analysis must employ the following factual inquiries:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Ding, et al.* (See CAPLUS or see CN 1356334). Applicants claim a process for the preparation of



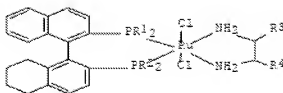
a chiral compound of formula

wherein X represents S or O and R

represents hydrogen, C1-6 alkyl, C3-5 cycloalkyl, aryl or aralkyl, each aryl or aralkyl being optionally further substituted as defined in claim 1 which process comprises the asymmetric hydrogenation of a compound of formula II wherein X and R are as defined above in the presence of a transition metal complex of a chiral bidentate phosphine ligand, that is a stabilizing and optionally a base.

The Scope and Content of the Prior Art (MPEP §2141.01)

Ding, et al. teaches an asymmetric catalytic hydrogenation of ketones by using a



Ru complex of formula

as a catalyst. The

various reactions disclosed in the reference include

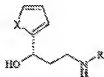


The Difference Between the Prior Art and the Claims (MPEP §2141.02)

The difference between the prior art of *Ding, et al.* and the instant invention is that the amine in the structure in the instant compounds is a methyl amine (secondary) whereas the amine in the prior art is a dimethyl amine (tertiary).

Prima Facie Obviousness-The Rational and Motivation (MPEP §2142-2413)

Applicants are claiming a process for preparing a compound of



formula

wherein the variables are as defined in claim 1 which the

process comprises the asymmetric hydrogenation of a compound of formula II in the presence of a transition metal complex of a chiral bidentate phosphine ligand. The prior art reference of *Ding, et al.* teaches a similar process wherein the amine group in the compound is a dimethyl amine(tertiary) versus a methyl amine (secondary) in the instant compound.

In Ex parte Bluestone, 135 USPQ 199, it was well established that the interchange of alkyl and hydrogen is obvious in and of itself and in addition secondary and tertiary amines are interchangeable. For example, it is obvious to prepare a beta amino ketone wherein the amine group is substituted with an alkyl group (i.e. methyl) using asymmetric hydrogenation in the presence of a transition metal complex of a chiral bidentate phosphine ligand when the art teaches a similar process wherein the amine group in the ketone is disubstituted with dimethyl with a reasonable expectation of success. Specifically, a monomethyl substituted beta-amino ketone and a dimethyl substituted beta-amino ketone are considered homologues and are obvious absent unexpected results. Therefore, it would have been prima facie obvious to one having ordinary skill in the art at the time the invention was made to prepare adjacent homologues by using asymmetric hydrogenation based on the teachings of the prior art. A strong prima facie obviousness has been established.

III. Objections

Dependent Claim Objections

Dependent Claims 2-11 and 13-23 are also objected to as being dependent upon a rejected based claim. To overcome this objection, Applicant should rewrite said claims in an independent form and include the limitations of the base claim and any intervening claim.

IV. Conclusion

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawquia Young whose telephone number is 571-272-9043. The examiner can normally be reached on 7:00 AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Shawquia Young/

Examiner, Art Unit 1626

/Rebecca L Anderson/

Primary Examiner, Art Unit 1626